TECHNICAL EDUCATION

SWASH™ Clothing Care System

SFF1000CSA*

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SFF1002CSA*

SFF1001CLN*

SFF1002CLN*

* Denotes Engineering Revision

FORWARD

This Whirlpool Job Aid, "SWASH™ Clothing Care System" (Part No. W10713431), provides the In-Home Service Professional with information on the operation and service of the "SWASH Clothing Care System."

GOALS AND OBJECTIVES

The goal of this Job Aid is to provide information that will enable the In-Home Service Professional to properly diagnose malfunctions and repair the "SWASH™ Clothing Care System."

The objectives of this Job Aid are to:

- Understand and follow proper safety precautions.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.
- Successfully return the clothing care system to its proper operational status.

WHIRLPOOL CORPORATION assumes no responsibility for any repairs made on our products by anyone other than authorized In-Home Service Professionals.

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PRODUCT SPECIFICATIONS & WARRANTY INFORMATION SOURCES (inside back cover)

Section 1: General Information

This section provides general safety, parts, and information for the “SWASH™ Clothing Care System.”

- SWASH™ System Safety
- Model & Serial Number Label
- Tech Sheet Location
- SWASH™ System
- SWASH™ System Overview
- SWASH™ System Specifications
- Notes

SWASH™ System Safety

Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and obey all safety messages.

This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word "DANGER" or "WARNING." These words mean:

⚠DANGER — **You can be killed or seriously injured if you don't immediately follow instructions.**

⚠WARNING — **You can be killed or seriously injured if you don't follow instructions.**

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

STATE OF CALIFORNIA PROPOSITION 65 WARNINGS:

WARNING: This product contains one of more chemicals known to the State of California to cause cancer.

WARNING: This product contains one or more chemicals know to the State of California to cause birth defects or other reproductive harm.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: To reduce the risk of fire, electric shock, or injury to persons when using the SWASH™ system, follow basic precautions, including the following:

- Read all instructions before using the SWASH™ system.
- Use the SWASH™ system only for its intended use.
- To reduce the risk of electric shock, do not immerse any part of SWASH™ system in water or other liquids.
- Never yank cord to disconnect from outlet; instead, grasp plug and pull to disconnect.
- Do not allow cord to touch hot surfaces. Let SWASH™ system cool completely before putting away. Loop cord loosely around SWASH™ system when storing.
- Always disconnect SWASH™ system from electrical outlet when not in use, or when cleaning SWASH™ system.
- Do not operate SWASH™ system with a damaged cord, or if it has been dropped or damaged. To reduce the risk of electric shock, do not disassemble or attempt to repair SWASH™ system. Contact a qualified service person for examination and repair. Incorrect reassembly or repair could cause a risk of fire, electric shock, or injury to persons when SWASH™ system is used.
- Close supervision is necessary for any appliance being used near children.
- Use care when interrupting a cycle; interior surfaces may be hot if SWASH™ system is opened when in use.
- To reduce the likelihood of circuit overload, do not operate other high-wattage hardware (i.e. refrigeration, air conditioner, etc) on the same circuit.
- The SWASH™ system is intended for household use only. Do not use outdoors.
- Do not use in garages or near any flammable liquids.
- Do not use an extension cord.
- The use of accessories other than those supplied with the SWASH™ system is not recommended and may cause injury.
- Use and store SWASH™ system out of regularly traveled paths to reduce the possibility of tip-over.
- Keep the area clear around the base of SWASH™ system to make sure ventilation openings in the bottom of SWASH™ system are not blocked.
- Do not modify SWASH PODS™ cups or use any alternate formulas. The SWASH™ system was designed to work safely using only the unique SWASH PODS™ cups. Any modifications could reduce user safety.
- Burns could occur from touching hot metal parts.

SAVE THESE INSTRUCTIONS

Model & Serial Number Label

Figure 1 - Located on back panel of SWASH™ system

Tech Sheet Location

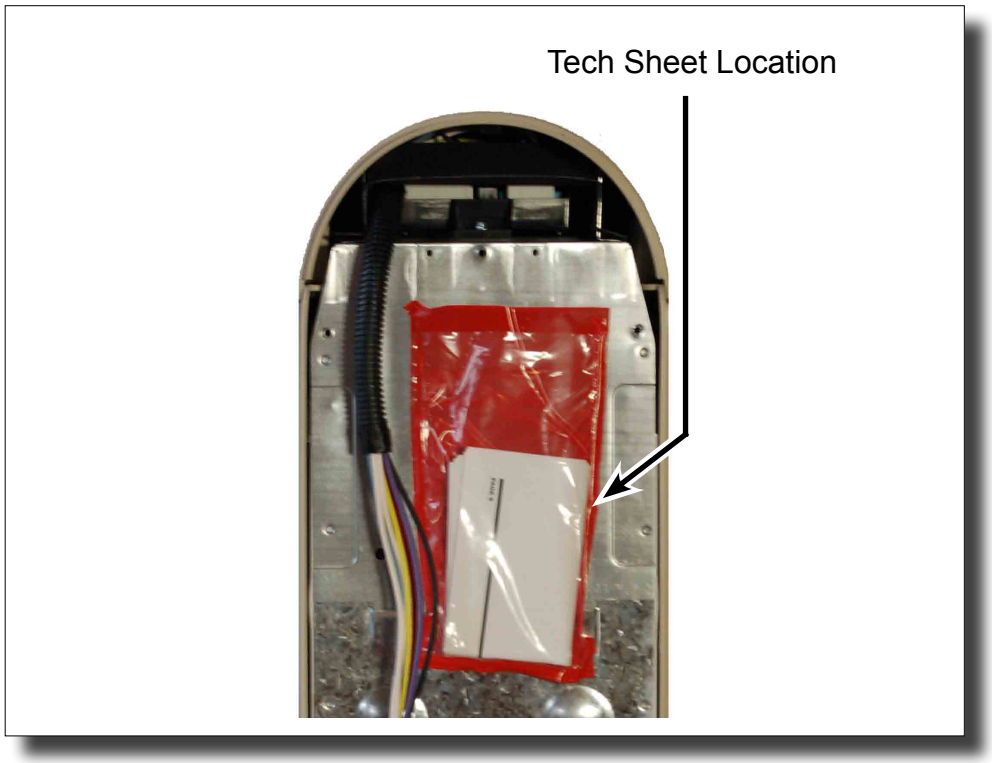


Figure 2 - Located behind the back panel of SWASH™ system

SWASH™ System

SWASH™ System Overview

SWASH™ Clothing Care System

The SWASH™ system gets clothes looking and feeling their best. De-wrinkle, Refresh, Restore, and Preserve clothes for results never before achievable at home with the SWASH system's 10 minute express clothing care. The SWASH system, an all-in-one, in-home, convenient clothing care system, has elements of a clothes steamer and an iron. Designed to fit in any life-style, the consumer can put the SWASH system almost anywhere, like their bedroom or closet. It uses a standard wall outlet, so all they have to do is plug it in and start living life unhampered.

The SWASH system works with a few key technologies. The Smoothing Clips provide the right amount of tension; a superfine mist of the SWASH PODS™ formula is sprayed onto both sides of the hanging clothes, and circulated heat removes light wrinkles and restores the fit to clothes that's lost after wear by tightening fibers without shrinking.

Using the SWASH system is as easy as plugging it into a standard 120 VAC wall outlet. No water, plumbing, pipes, vents, special hook-ups, or professional installation assistance is needed.

SWASH™ System Specifications

Voltage:	120 VAC, 60 Hz
Heater Wattage:	1300 W
Countdown and Display Status:	LED Countdown Time Remaining - White LEDs Cycle Done - Blue LED Cup Missing - Orange LED
Cycles:	Normal - 10 minutes Heavy Duty - 15 minutes Cancel
Number of Cycles:	3
Number of Garments:	2-Sided Treatment of 1 Garment 1-Sided Treatment of 2 Garments
Number of Smoothing Clips:	6
Number of Sprays:	4
Pocket Smoother	1
Height:	51 in.
Width:	16 in.
Depth:	30 in.
Depth with door open:	54 in.

Notes

Section 2: Operation

This section provides operational use and care information for the “SWASH™ Clothing Care System.”

- Connecting the SWASH™ System
- Buttons and Status Lights
- How Does the SWASH™ System Work?
- How to Use SWASH™ System
- Hanging Clothes
- Emptying the Reservoir
- Consumer Troubleshooting
- SWASH™ System Tips
- Notes

Connecting the SWASH™ System

⚠WARNING

Excessive Weight Hazard

Use two or more people to move SWASH unit.

Failure to do so can result in back or other injury.

Connecting the SWASH™ System

Plug your SWASH™ system into a standard grounded electrical outlet (110v). No plumbing, pipes, or vents needed.

⚠WARNING

Electrical Shock Hazard

Plug into a grounded 3 prong outlet.

Do not remove ground prong.

Do not use an adapter.

Do not use an extension cord.

Failure to follow these instructions can result in death, fire, or electrical shock.

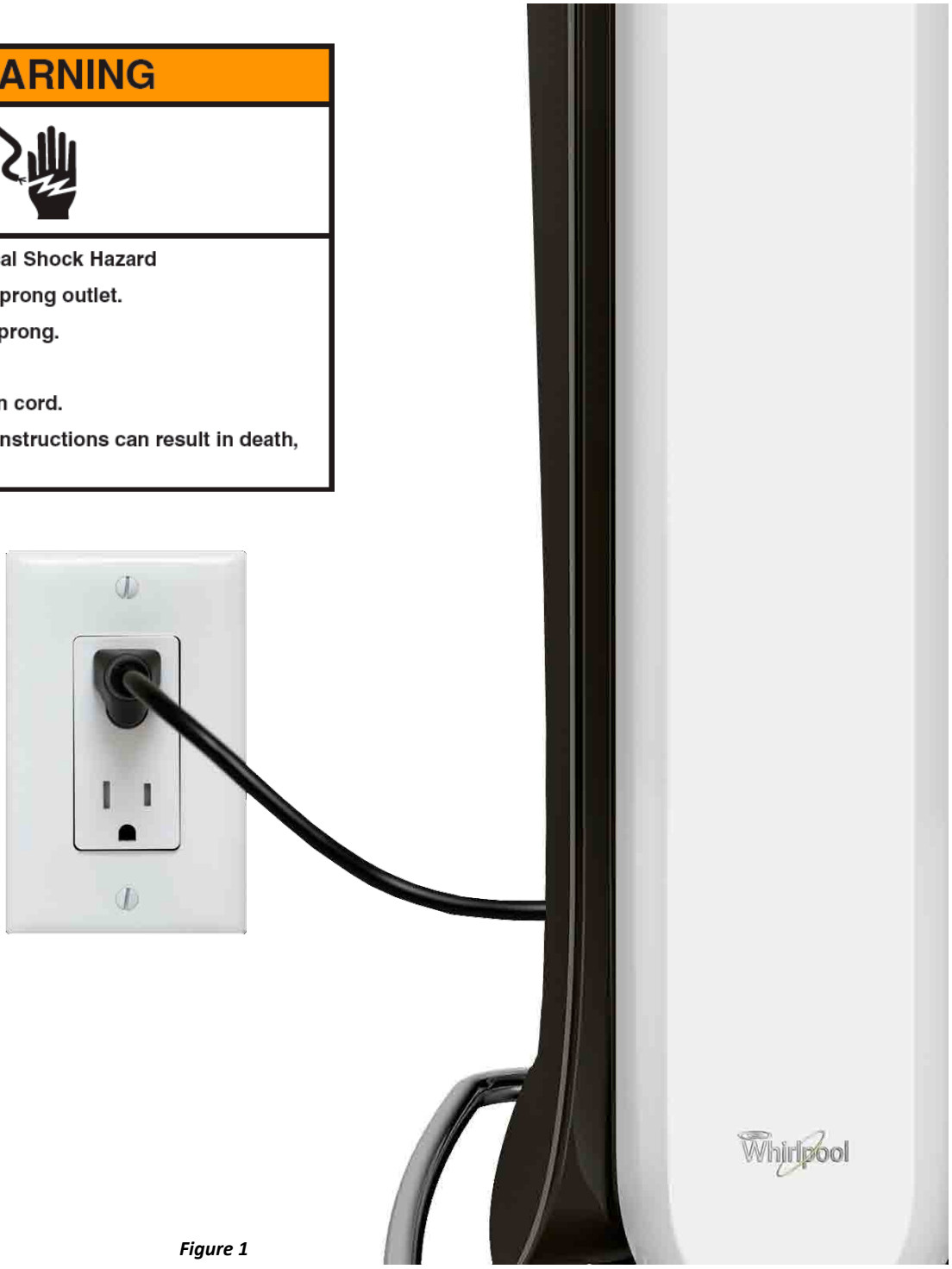
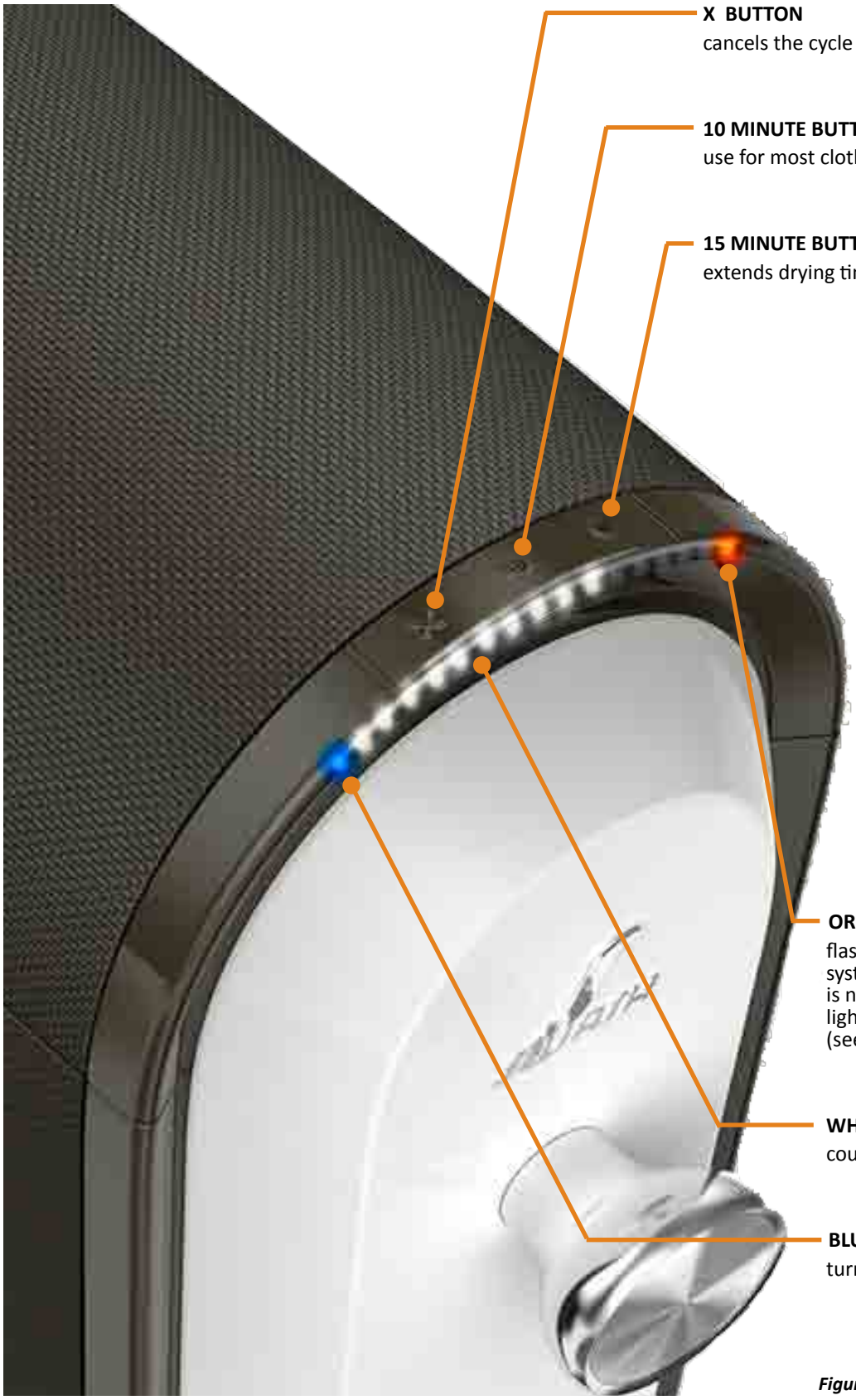


Figure 1

Buttons and Status Lights



X BUTTON
cancels the cycle

10 MINUTE BUTTON (STANDARD CYCLE)
use for most clothing

15 MINUTE BUTTON (EXTENDED CYCLE)
extends drying time for heavier clothing

ORANGE LIGHT
flashes if you try to start SWASH™ system without a cup or if the door is not completely closed. If other lights are on with the orange light (see troubleshooting)

WHITE LIGHTS
count down the minutes remaining

BLUE LIGHT
turns on when your cycle is finished

Figure 2

How Does the SWASH™ System Work?

The SWASH™ system works with a few key technologies. A superfine mist of the SWASH PODS™ formula is sprayed onto both sides of the hanging clothes. The smoothing clips (optional) pull clothes tight, and heat is circulated.

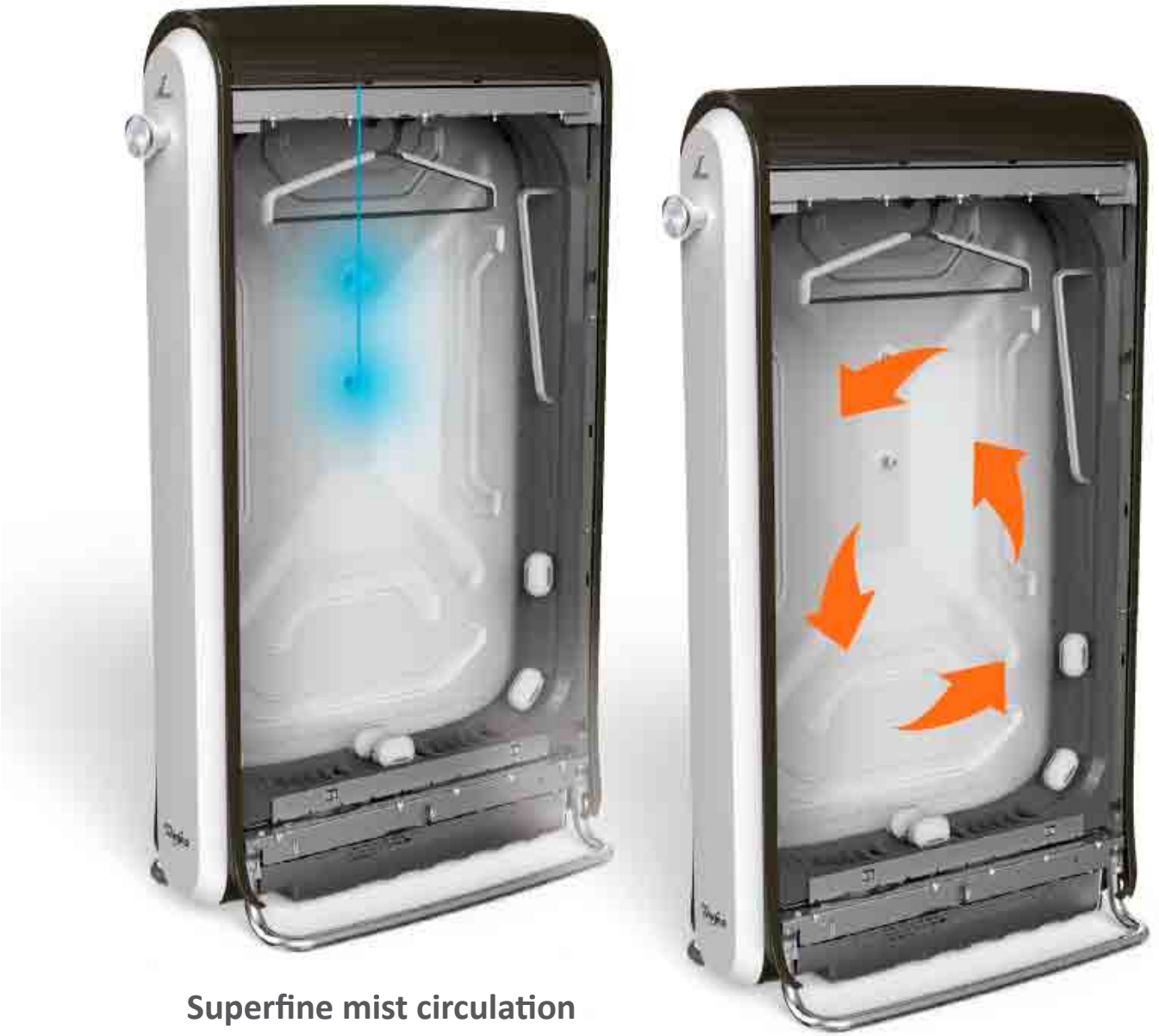


Figure 3

How to Use SWASH™ System

Operating Basics

Hang

1. Pull out drawer and hang clothes in machine. See pages 6-7 for more information on how to hang clothes.

Load

2. Load a SWASH POD™ cup in top of drawer and close drawer firmly (see Figure 4). Do not remove film from cup as it will get pierced when you push the drawer in. Only use SWASH PODS™ cups.

Figure 4

Start

3. Select cycle button to Start. Tap on “10” for standard cycle, “15” for extended cycle, or “X” to cancel. See page 3 for more information.

Figure 5

4. White LEDs will count down the minutes remaining and a blue light will let you know when the cycle is done (see Figure 6).

Figure 6

5. Remove the empty SWASH PODS™ cup.
6. Remove garment from SWASH™ system and enjoy.

Hanging Clothes

Hanging Your Clothes

Smoothing clips aren't needed for refreshing. You can get great results with minimal effort. For smoothing wrinkles, try experimenting with a few clips.

IMPORTANT: The SWASH™ system is not recommend for silk, leather, velvet, suede, and fur. Some temporary spots may occur. If this happens, clean per clothing manufacturer's instructions.

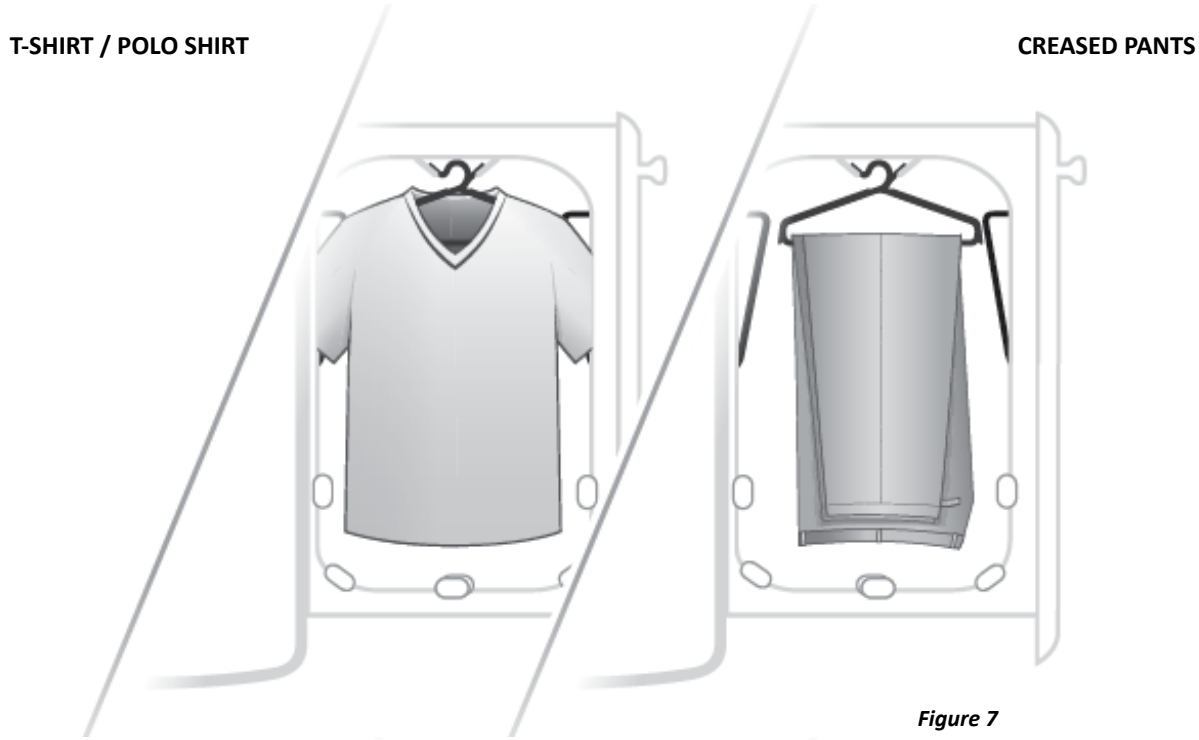


Figure 7

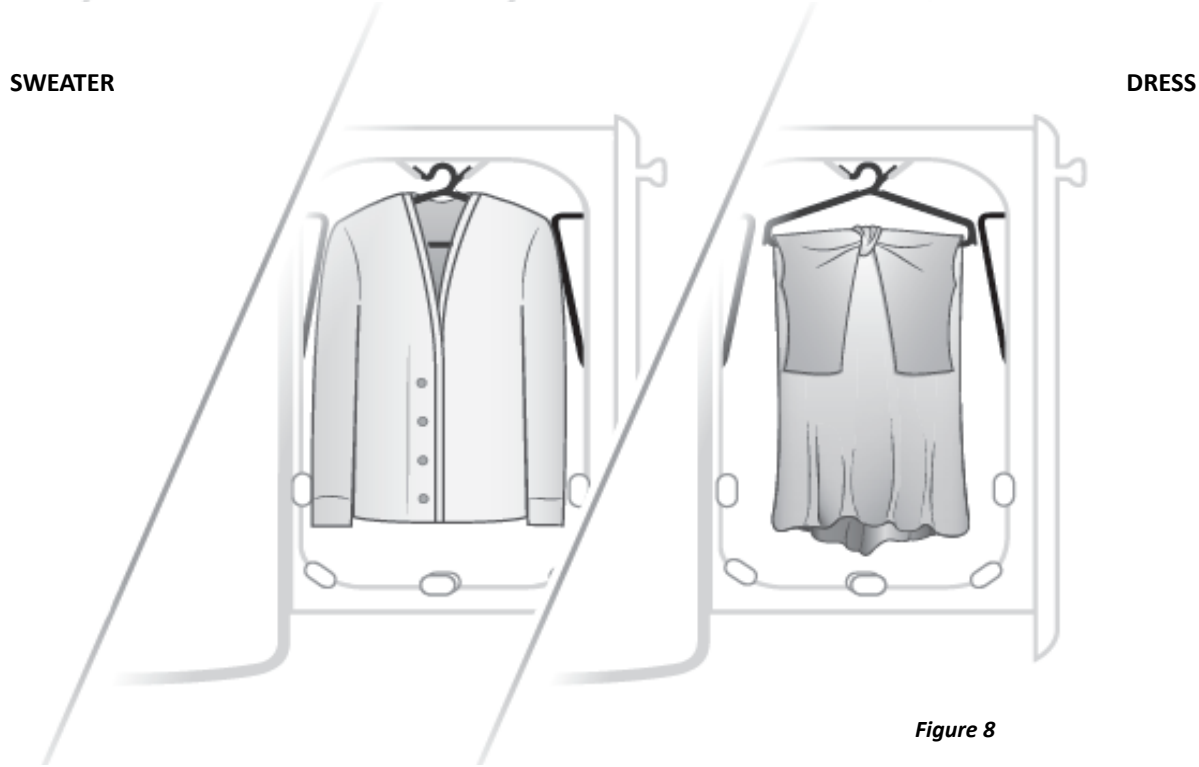


Figure 8

Hanging Clothes (Continued)

Button Down Shirt

Place sleeves through sleeve wraps and clip. Use the remaining 4 clips to pull flat and hold tight to get maximum wrinkle release. Finally put pocket smoother in pocket.

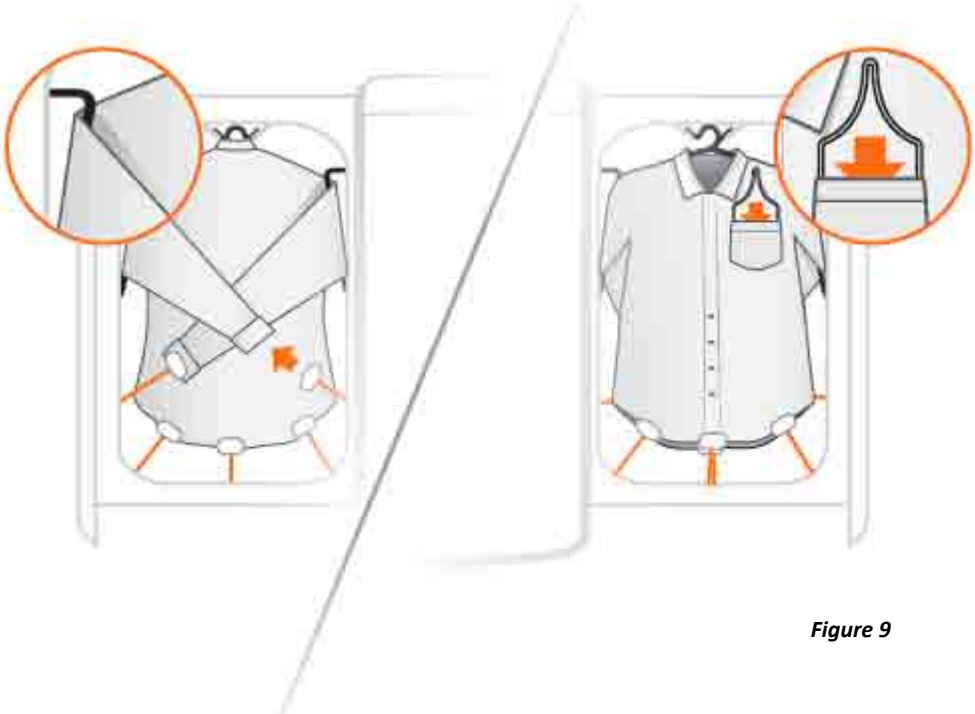


Figure 9

Pants or Jeans

Hang legs over the top of hanger first and then clip. Pull waist down and clip to get the most area exposed to the SWASH PODS™ formula.

Shorts or Skirts

Pull a couple of smoothing clips through the hanger for shorts and skirts.

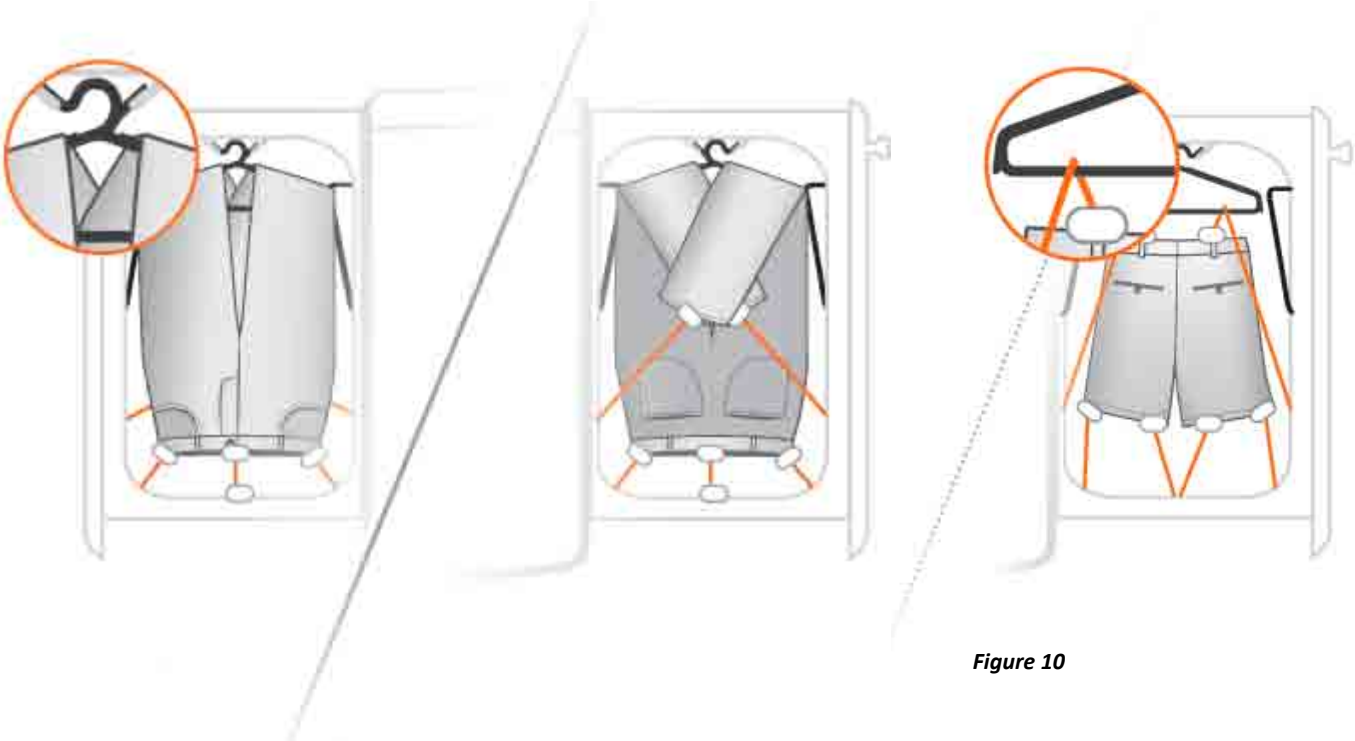


Figure 10

Emptying the Reservoir

Emptying the Reservoir

The SWASH™ system is designed to collect any excess mist for easy disposal. If the orange and blue lights are both flashing, you will need to empty the reservoir that collects the excess mist.

1. Locate reservoir at rear base of SWASH™ system.

Figure 11

2. Remove reservoir and take to sink (see Figure 12).

Figure 12

3. Pull plug and empty out liquid in sink (see Figure 13).

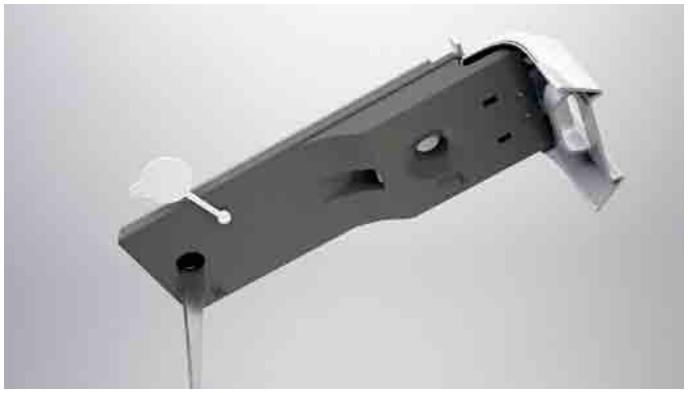


Figure 13

4. Replace plug and insert reservoir back into SWASH™ system (see Figure 14).

Figure 14

Consumer Troubleshooting

Troubleshooting

Nothing happens when you push the 10 or 15 minute button

- Check to make sure the SWASH™ system is plugged into a power outlet.
- If SWASH™ system is plugged in, unplug it and plug it back in to reset.

SWASH™ system does not work as well as expected

- Select the recommended cycle based on your clothing type.
- Keep longer clothes from laying on the bottom of the device.
- SWASH™ system is only recommended for 2 lightweight items. For best results, refresh only one item at a time.
- Do not operate, install, or store the SWASH™ system where it will be exposed to water, weather, or at temperatures below 50° F (10° C). Let the SWASH™ system and SWASH PODS™ cups warm up to room temperature before use.

You have a spot on your clothing after a cycle.

- The SWASH PODS™ formula may leave a spot on some fabrics. These spots are easily removed when clothes are washed or dry-cleaned according to clothing manufacturer's care label.

1. Orange light is blinking - SWASH™ system will not start

- Make sure door is closed properly.
- Make sure cup is loaded in bay. If cup is empty or missing, replace with new cup. Use only SWASH PODS™ cups in your SWASH™ system.

2. Orange and blue lights are blinking

- The reservoir is full and needs to be emptied, or is missing and needs to be replaced. See emptying the reservoir on page 2-8.

3. Orange and white lights on

- If orange and time remaining lights are solid. SWASH™ system is paused. Close door and cycle will resume.

4. Orange light blinking and white lights on

- If orange light is blinking and at least two white lights are solid, SWASH™ system is not working. See Section 4, "Diagnostics and Troubleshooting."

SWASH™ System Tips

Multiple Clothing Items

The SWASH™ system works best on one item. If refreshing 2 items at a time, hang them back-to-back for best results. Additional SWASH™ hanger required. You can order additional hangers at SWASH.COM.

Reducing Wrinkles

To maximize wrinkle release, button or zip up your clothing. Use the smoothing clips for non-stretchy fabrics. Make sure your clothes are tight and smooth.

Smoothing Clips

Experiment with the smoothing clips to find what gives you the best results for your clothes. You may not need all of the provided smoothing clips to get great results.

Temperature Use

If your SWASH™ system or SWASH PODS™ cups have just come inside from very cold weather, allow them to sit for a while to get to room temperature before using.

Cleaning SWASH™ system

Use a soft, damp cloth or sponge to wipe your SWASH™ system to help keep it looking new.

Wash Hands after Cleaning

If eye contact occurs, rinse well with water. If irritation persists, get medical attention.

Visit swash.com/setup for additional information and video demonstrations.

Notes

Section 3: Component Access

This section provides service parts access, removal, and installation instructions for the "SWASH™ Clothing Care System."

- SWASH™ System Exploded Views
- SWASH™ System Parts List
- Removing the Rear Panel
- Removing the Top Cover & Control Housing
- Removing the User Interface
- Removing the Dispensing System
- Removing the Pump Assembly
- Removing the Appliance Control Unit (ACU)
- Removing the Thermistor
- Removing the Door Assembly
- Removing the Clips & Roller Assembly
- Removing Base Components
- Removing the Side Panels
- Notes

SWASH™ System Exploded View

NOTE: The SWASH™ System Exploded View was not available at the time of publication. Please refer to PartSmartweb Online Parts Catalog for product related parts information.

This page is a place-holder for future revision.

Reference Parts List on page 3

SWASH™ System Part List

NOTE: The SWASH™ System Parts List was not available at the time of publication. Please refer to PartSmartweb Online Parts Catalog for product related parts information.

This page is a place-holder for future revision.

Removing the Rear Panel

⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

1. Unplug the SWASH™ Clothing Care System.
2. Locate the reservoir at the rear base of the unit.
3. Remove the reservoir and set aside.

Figure 2

4. Remove back cover. Using a T-20 TORX driver, remove the 9 screws securing the back cover to the SWASH system (see Figure 2).

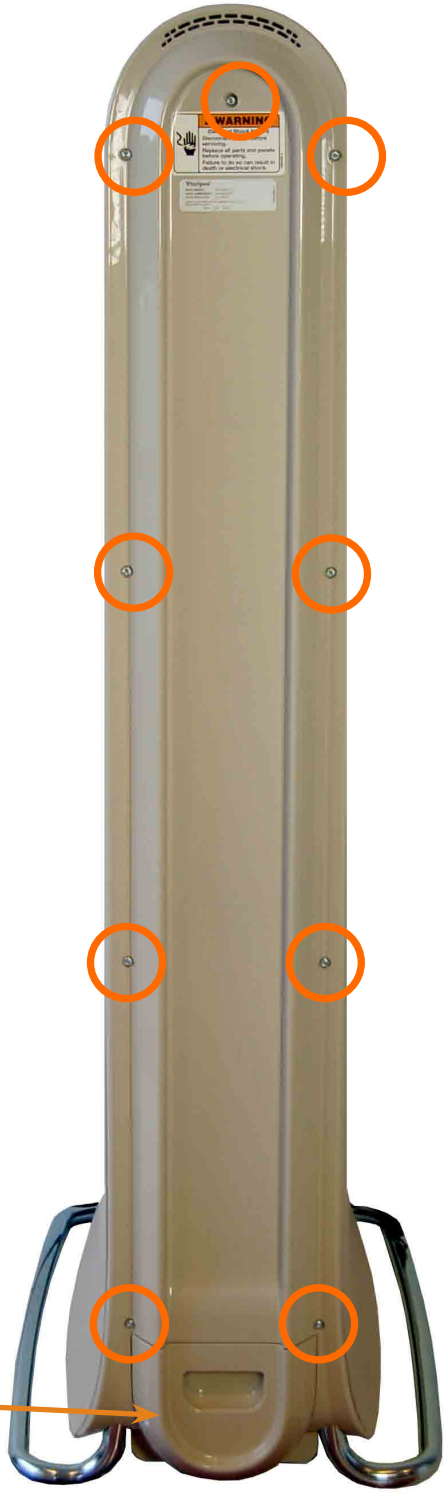


Figure 2

5. Set aside back panel for reinstallation.

Removing the Top Cover & Control Housing

⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

1. First, perform procedure on page 3-4, “Removing the Rear Panel” prior to performing the following steps.
2. Remove the top cover by sliding the cover back “slightly” towards the rear of the unit (see Figure 1).

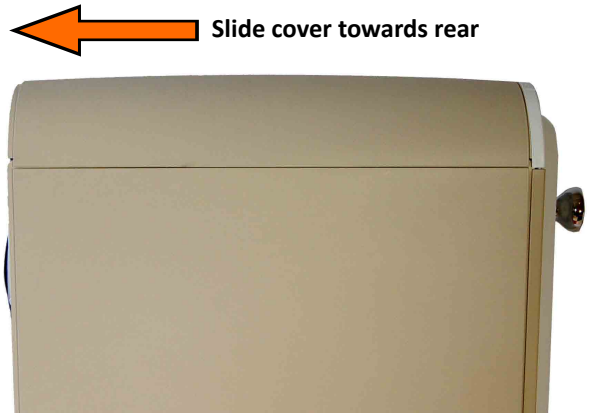


Figure 1

3. Lift the top up and away from the unit—starting from the back (see Figure 2). Remove cover and set aside.

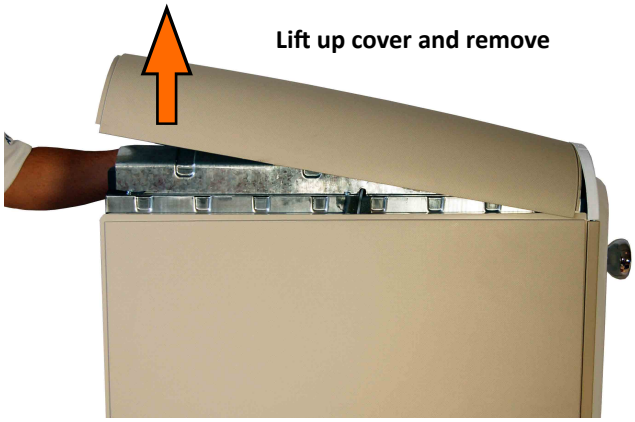


Figure 2

4. Using a 1/4” socket, remove the six (6) screws (3 on each side) securing the control housing to the unit (see Figure 3).

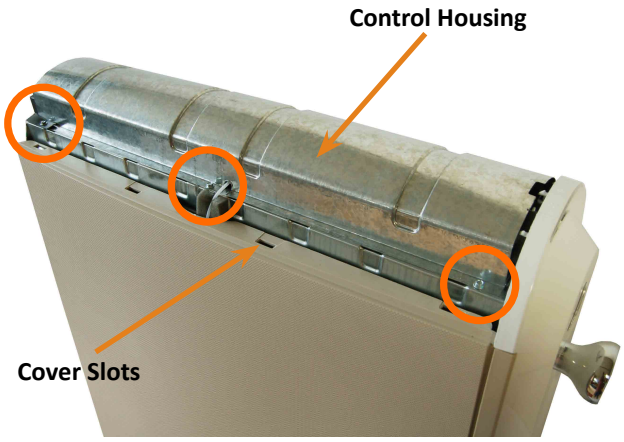


Figure 3

5. Remove harness shield from back of the control housing (see Figure 4).

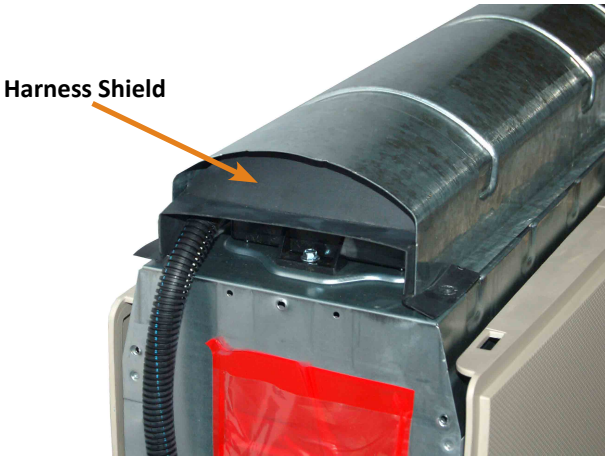


Figure 4

6. Remove control housing and set aside (see Figure 5).

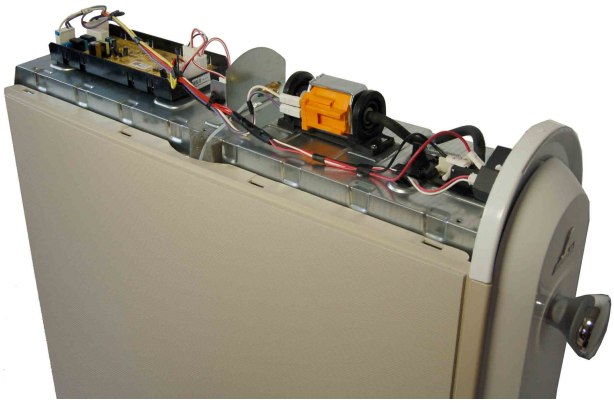


Figure 5

Removing UI and Dispensing System

⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

Removing the User Interface

1. First, perform procedure on page 3-4, “Removing the Rear Panel” prior to performing the following steps.
2. Next, perform procedure on page 3-5, “Removing Top Cover and Control Housing.
3. Slide open door.
4. Disconnect harness from UI PCB. See Figure 1.
5. Using a 1/4” nut driver, remove the two (2) screws securing the User Interface to the control bracket as illustrated in Figure 1. Pull UI Assembly forward over the door switch and remove from unit.

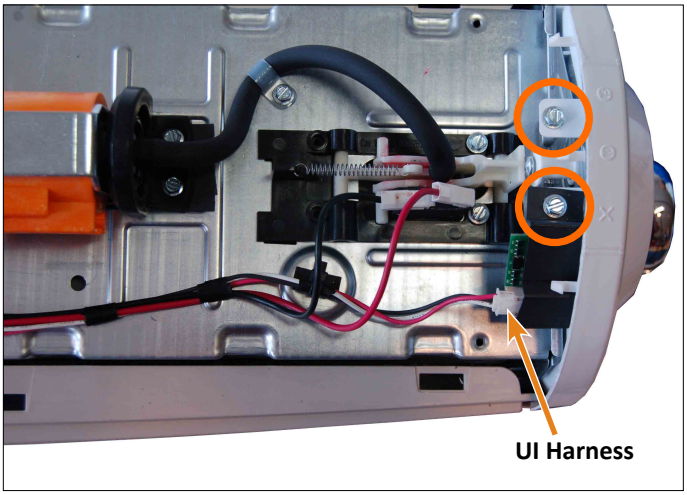


Figure 1 - User Interface

Removing the Dispensing System

1. First, perform procedure on page 3-4, “Removing the Rear Panel” prior to performing the following steps.
2. Next, perform procedure on page 3-6, “Removing Top Cover and Control Housing.
3. Disconnect hose from Dispensing System.
4. Disconnect harness from Dispensing System micro-switch. See Figure 1.
5. Using a 1/4” nut driver, remove the two (2) screws securing the Dispensing System to the control bracket as illustrated in Figure 1. Remove Dispensing System from the unit.

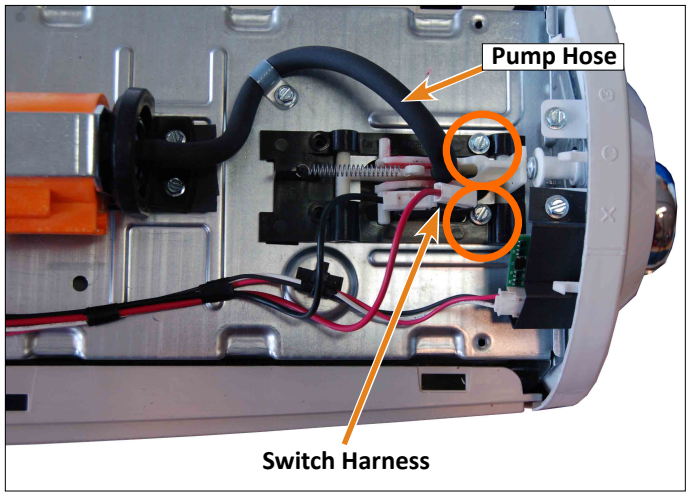


Figure 1 - Dispensing System

Removing Pump, ACU, and Thermistor

⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

Removing the Pump Assembly

1. First, perform procedure on page 3-4, “Removing the Rear Panel” prior to performing the following steps.
2. Next, perform procedure on page 3-5, “Removing Top Cover and Control Housing.
3. Disconnect hose from Pump Assembly (see Figure 1).
4. Disconnect hoses from “T” fitting (see Figure 1).
5. Disconnect harness from Pump Assembly (see Figure 1).
6. Using a 1/4” nut driver, remove the four (4) screws securing the Pump Assembly to the control bracket (see Figure 1). Remove Pump Assembly from the unit.

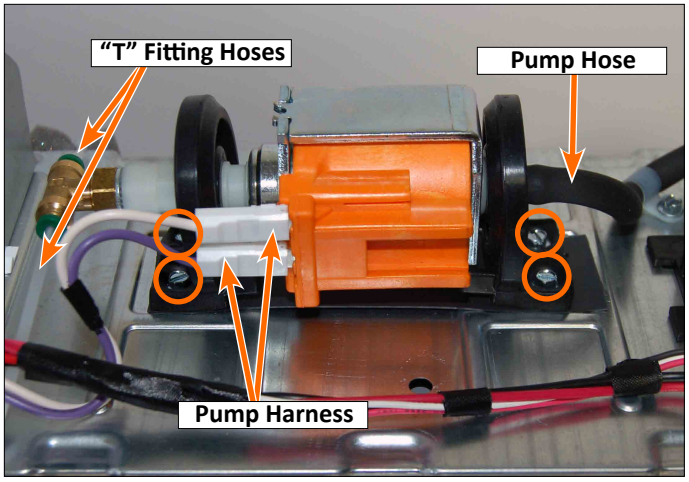


Figure 1 - Pump Assembly

Removing the Appliance Control Unit (ACU)

1. First, perform procedure on page 3-4, “Removing the Rear Panel” prior to performing the following steps.
2. Next, perform procedure on page 3-5, “Removing Top Cover and Control Housing.
3. Disconnect the four (4) harnesses from the Appliance Control Unit (ACU).
4. Using a 1/4” nut driver, remove the one (1) screw securing the ACU to the control bracket (see Figure 1). Remove ACU from unit.

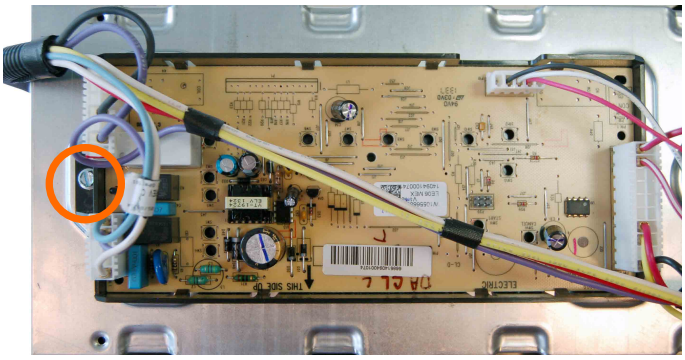


Figure 1 - ACU

Removing the Thermistor

1. First, perform procedure on page 3-4, “Removing the Rear Panel” prior to performing the following steps.
2. Next, perform procedure on page 3-5, “Removing Top Cover and Control Housing.
3. Disconnect the two (2) wires going to the Thermistor Assembly (see Figure 1).
4. Using a 1/4” nut driver, remove the two (2) screws securing the Thermistor to the control bracket (see Figure 1). Remove Thermistor from unit.

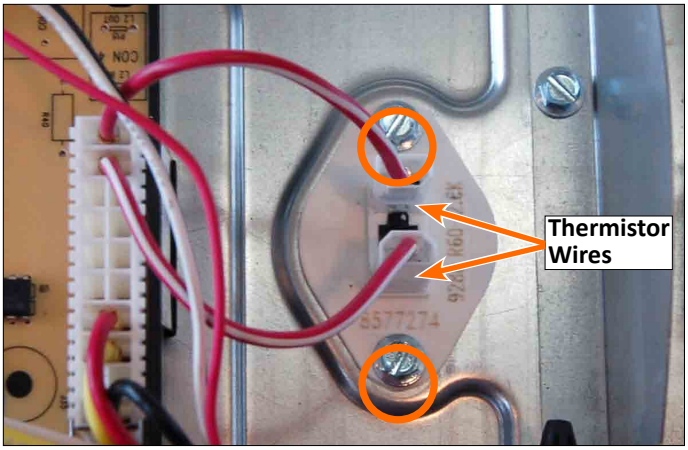


Figure 1 - Thermistor

Removing the Door Assembly

⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

Removing the Door Assembly

1. Unplug the SWASH™ Clothing Care System.
2. Slide open the door assembly as far as possible (see Figure 1).

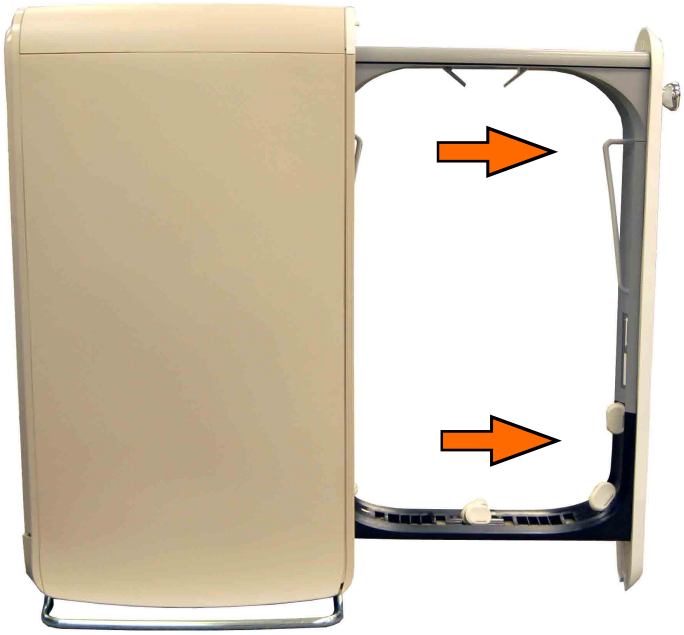


Figure 1

3. Lay SWASH™ system on its side to access the bottom of the door assembly (see Figure 2).
4. **Separate the lower slide from the door frame**. Using a #2 Phillips screwdriver, remove the two (2) 'side-mounted' screws and using a #15 TORX driver, remove the four (4) 'bottom-mounted' screws as illustrated in Figure 2.

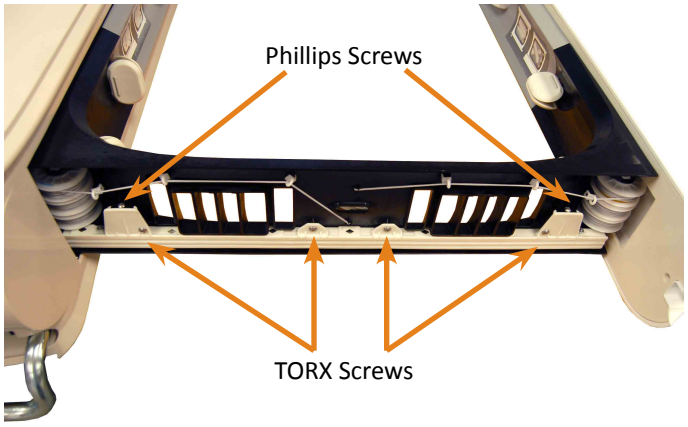


Figure 2

NOTE: When reassembling the door frame to the lower slide, be sure to place the tab of the lower slide assembly into the slot located under the door frame as shown in Figure 3.

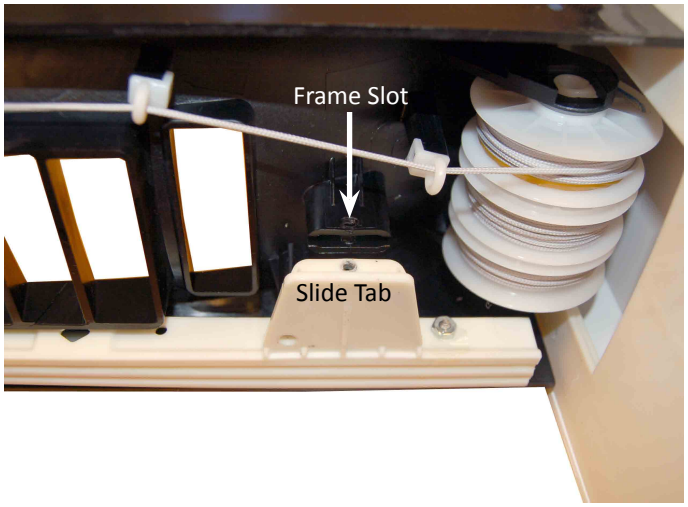


Figure 3

continued . . .

Removing the Clips & Roller Assembly

5. Set SWASH™ system upright. Using a #15 TORX driver, remove the two (2) screws securing the top door cover as illustrated in Figure 4. Remove cover to expose the upper slide assembly.

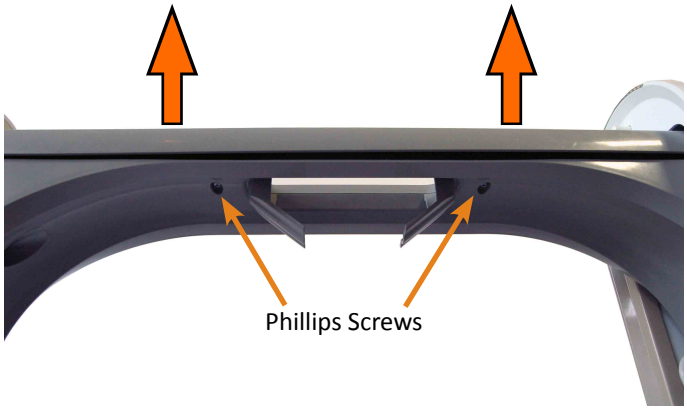


Figure 4

6. **Separate the upper slide from the door frame**. Using a #1 Phillips screwdriver, remove the three (3) bolts and nuts securing the upper door to the slide assembly. See Figure 4. Door assembly can now be removed from SWASH™ system.

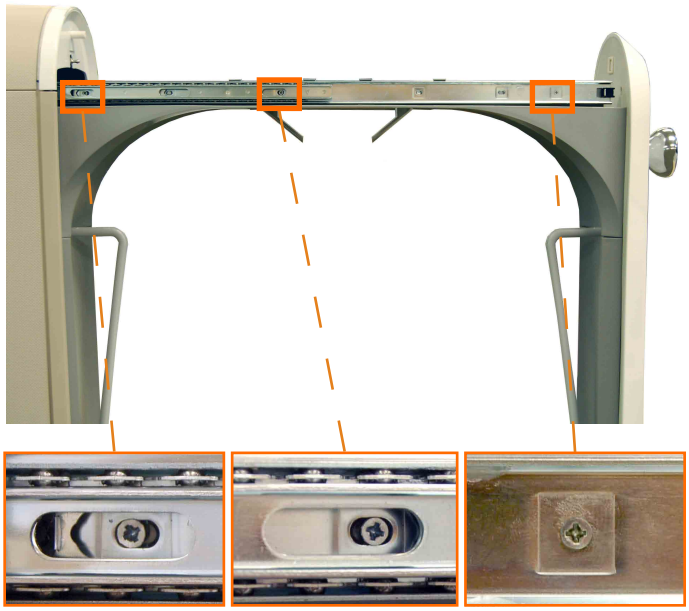
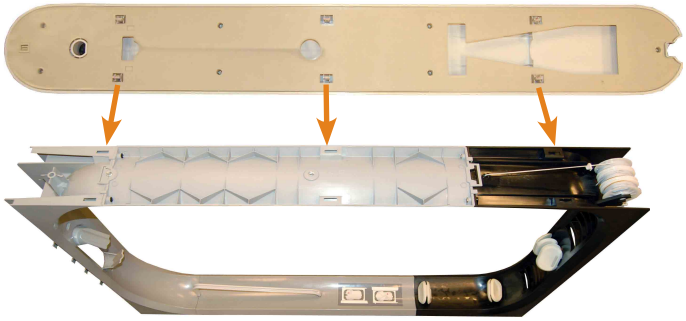


Figure 4

Removing the Clips & Roller Assembly

1. First, perform procedure on page 3-8, "Removing the Door Assembly" prior to performing the following steps.
2. Using a #2 Phillips screwdriver, remove the door knob from door assembly.
3. Remove door cover from door frame. The door cover is attached to the frame by six (6) clips (see Figure 1). Slowly pull the door cover from the frame 1 clip at a time starting from the bottom and working to the top.



Figures 1 & 2

4. Remove Clip and Roller Assembly. Using a #2 Phillips screwdriver, remove the four (4) screws (2 on each side) securing the clips & roller assembly to the upper door frame. See Figure 3.

Figure 3

Removing Base Components

⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

1. Unplug the SWASH™ Clothing Care System.
2. Locate the reservoir at the rear base of the unit. (Refer to page 3-4 for location of reservoir.)
3. Remove the reservoir and set aside.
4. Lay SWASH™ system on its back (see Figure 1).
5. Using a 1/4” nut driver, remove the five (5) screws securing the bottom plate to the unit (see Figure 1). Remove bottom plate and set aside.

Figure 1

6. Using a #20 TORX driver, remove the four (4) screws securing the reservoir housing to the unit (see Figure 2).

Figure 2

7. Remove the reservoir housing by sliding two flat bladed screwdrivers in-between the housing and side panel of unit. Gently, move the side panel away from the housing until it pops free from base. See Figure 3.

Figure 3

Removing Base Components (continued)

8. Disconnect the blower and heater connectors (see Figure 4).
9. Using a 1/4 nut driver, remove the screw securing the ground wire coming from the blower motor (see Figure 4).
10. Using a 1/4” nut driver, remove the seven (7) screws securing the blower/heater assembly to the unit (see Figure 4).
11. To remove the heater from the blower/heater assembly, use a 1/4” nut driver to remove the two screws securing the heater to the blower housing (see Figure 5 below).
12. Remove heater assembly from blower housing. The heater assembly contains the heater coil, thermal cutoff, and high limit thermostat. (See Figure 6.)

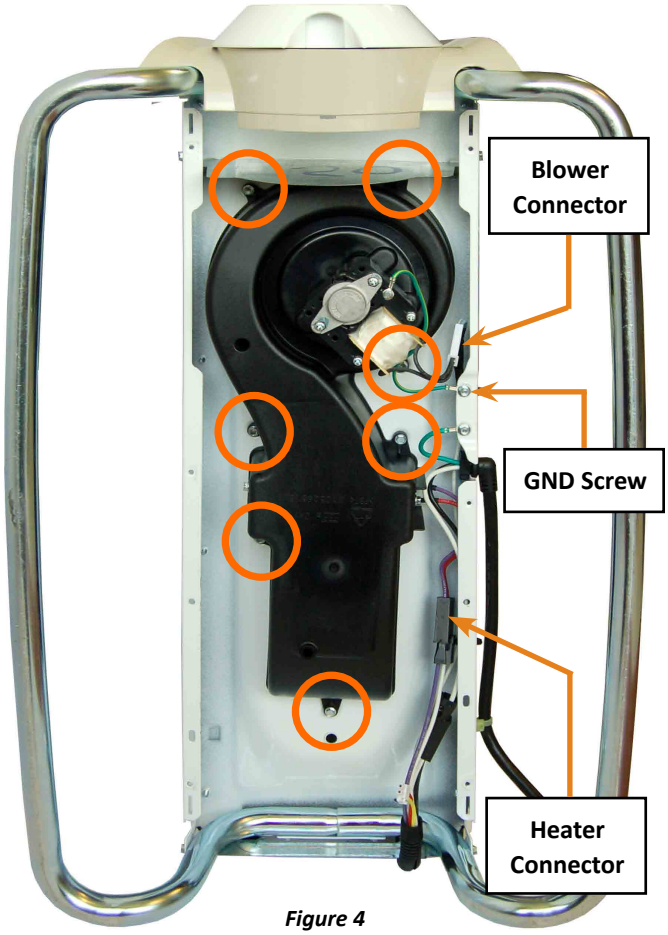


Figure 4

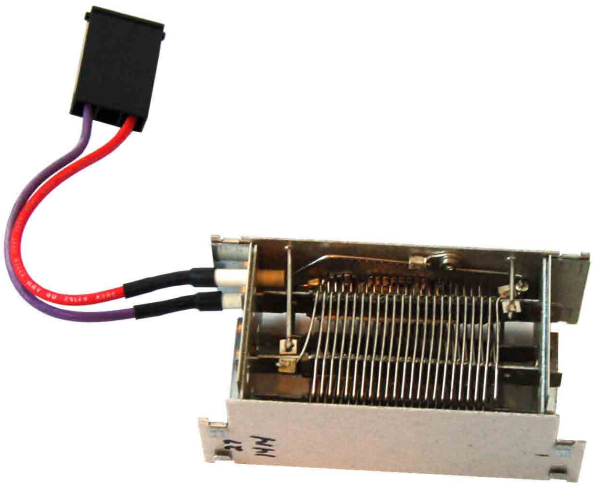


Figure 6

IMPORTANT: The fan motor and blower wheel cannot be replaced individually. The fan motor, blower wheel, and blower housing must be replaced as an assembly.

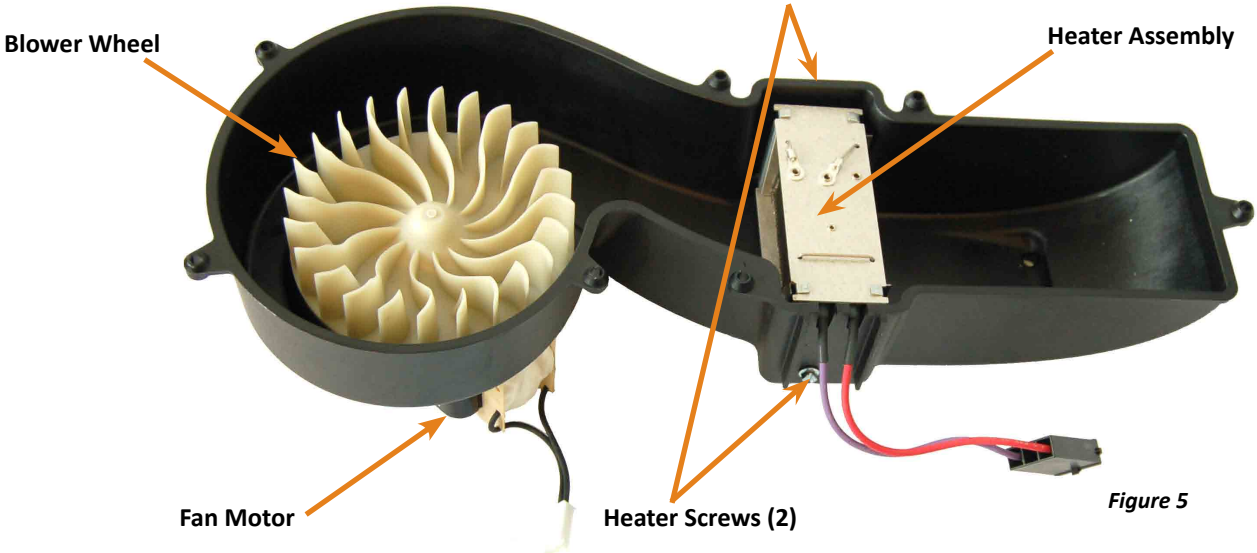


Figure 5

Removing the Side Panels

⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

1. First, perform procedure on page 3-6, “Removing the Rear Panel” prior to performing the following steps.
2. Next, perform steps 1 - 3 on page 3-7, “Removing Top Cover and Control Housing.
3. Side panels are held in place with tabs (see Figure 2). To remove side panel, grasp top of panel on each side and lift up (see Figure 1). Set aside for reassembly.

Figure 1

4. Repeat process for other side.

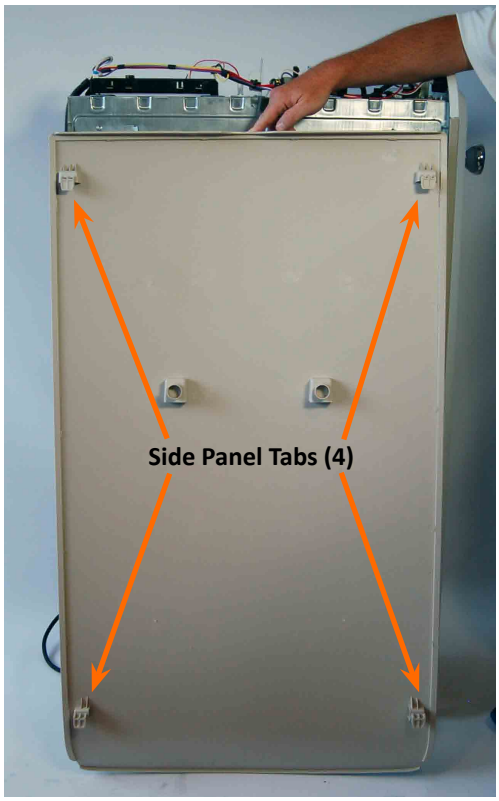


Figure 2

5. SWASH™ system with side panels removed (see Figure 4). **NOTE:** Two (2) sprayers on each side of cabinet.

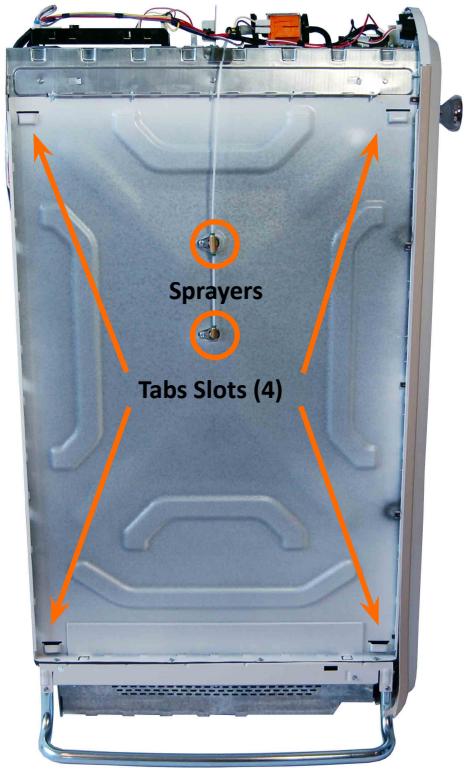


Figure 3

Notes

Notes

Section 4: Diagnostics & Troubleshooting

This section provides diagnostic, fault codes, and troubleshooting information for the “SWASH™ Clothing Care System.”

- Safety First
- Customer Troubleshooting
- Customer Error Codes
- Control Panel
- Diagnostic Guide
- Service Diagnostics
- Service Diagnostic Functions
- Fault / Error Codes
- Troubleshooting Guide
- Wiring Diagram
- Appliance Control Unit (ACU)
- User Interface (UI) Assembly
- Strip Circuits
- Notes

For Service Technician Use Only

⚠ DANGER

Electrical Shock Hazard

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

Voltage Measurement Safety Information

When performing live voltage measurements, you must do the following:

- Verify the controls are in the off position so that the appliance does not start when energized.
- Allow enough space to perform the voltage measurements without obstructions.
- Keep other people a safe distance away from the appliance to prevent potential injury.
- Always use the proper testing equipment.
- After voltage measurements, always disconnect power before servicing.

IMPORTANT: Electrostatic Discharge (ESD) Sensitive Electronics
ESD problems are present everywhere. Most people begin to feel an ESD discharge at approximately 3000V. It takes as little as 10V to destroy, damage, or weaken the main control assembly. The new main control assembly may appear to work well after repair is finished, but a malfunction may occur at a later date due to ESD stress.

- **Use an anti-static wrist strap. Connect wrist strap to green ground connection point or unpainted metal in the appliance**

-OR-

- **Touch your finger repeatedly to a green ground connection point or unpainted metal in the appliance.**
- **Before removing the part from its package, touch the anti-static bag to a green ground connection point or unpainted metal in the appliance.**
- **Avoid touching electronic parts or terminal contacts; handle electronic control assembly by edges only.**
- **When repackaging main control assembly in anti-static bag, observe above instructions.**

IMPORTANT SAFETY NOTICE — "For Technicians only"

This service data sheet is intended for use by persons having electrical, electronic, and mechanical experience and knowledge at a level generally considered acceptable in the appliance repair trade. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible, nor assume any liability for injury or damage of any kind arising from the use of this data sheet.

For Service Technician Use Only

Customer Troubleshooting

Nothing happens when you push the 10 or 15 minute button

- Check to make sure the SWASH™ system is plugged into a power outlet.
- If SWASH™ system is plugged in, unplug it and plug it back in to reset.

SWASH™ system does not work as well as expected

- Select the recommended cycle based on your clothing type.
- Keep longer clothes from laying on the bottom of the device.
- SWASH™ system is only recommended for 2 lightweight items. For best results, refresh only one item at a time.
- Do not operate, install, or store the SWASH™ system where it will be exposed to water, weather, or at temperatures below 50° F (10° C). Let the SWASH™ system and SWASH PODS™ cups warm up to room temperature before use.

You have a spot on your clothing after a cycle.

- The SWASH PODS™ formula may leave a spot on some fabrics. These spots are easily removed when clothes are washed or dry-cleaned according to clothing manufacturer's care label.

Customer Error Codes

1. Orange light is blinking - SWASH™ system will not start

- Make sure door is closed properly.
- Make sure cup is loaded in bay. If cup is empty or missing, replace with new cup. Use only SWASH PODS™ cups in your SWASH™ system.

2. Orange and blue lights are blinking

- The reservoir is full and needs to be emptied, or is missing and needs to be replaced. See emptying the reservoir on page 2-8.

3. Orange and white lights on

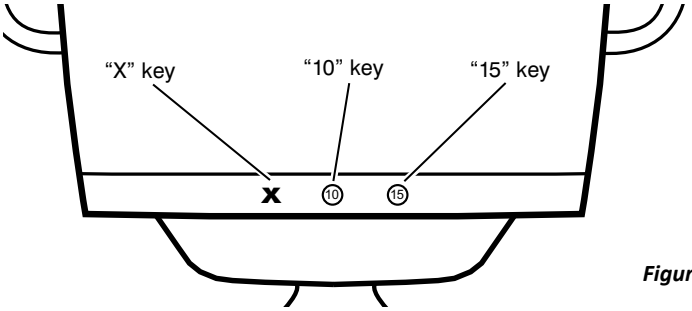
- If orange and time remaining lights are solid. SWASH™ system is paused. Close door and cycle will resume.

4. Orange light blinking and white lights on

- If orange light is blinking and at least two white lights are solid, SWASH™ system is not working. See Section 4, "Diagnostics and Troubleshooting."

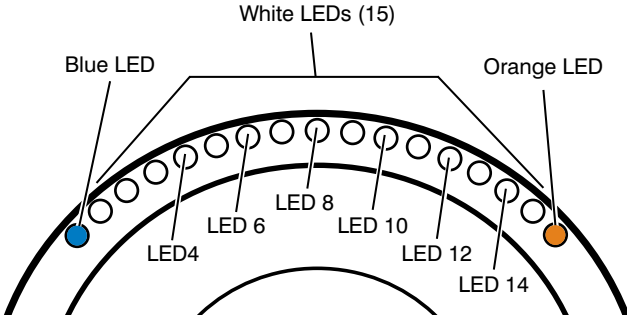
For Service Technician Use Only

Control Panel



Control Panel, Viewed From Above

Figure 1



Control Panel, Viewed From Front

Diagnostic Guide

Before servicing, check the following:

- Make sure there is power at the wall outlet.
- Has a household fuse blown or circuit breaker tripped? Was a regular fuse used? Inform the customer that a time delay fuse is required.
- All tests/checks should be made with a VOM (volt-ohm-milliammeter) or DVM (digital-voltmeter) having a sensitivity of 20,000 Ω per volt DC or greater.
- Check all connections before replacing components. Look for broken or loose wires, failed terminals, or wires not pressed into connections far enough.
- A potential cause of a control not functioning is corrosion on connections. Observe connections and check for continuity with an ohmmeter.
- Connectors: Look at top of connector. Check for broken or loose wires. Check for wires not pressed into connector far enough to engage metal barbs.
- Resistance checks must be made with power cord unplugged from outlet, and with wiring harness or connectors disconnected.

Service Diagnostics

NOTE: THE ONLY WAY TO ENTER SERVICE DIAGNOSTICS IS FROM THE OFF MODE.

The SWASH™ system should be able to enter service diagnostics mode regardless of the state of door switch and reservoir switch.

Right after powering up (plugging in the SWASH™ system), you will have 30 seconds to press the three different keys in any sequence three times within 10 seconds to place the SWASH™ system in service diagnostic mode. If the key sequence is not completed within the 10 second time period, entrance to service diagnostic mode will not occur. If entrance to service diagnostic mode is successful, the following sequence of events will occur:

1. If the reservoir switch is ON, all 15 white LEDs will flash ON and OFF. The tester must verify that no LED is missing. If the reservoir switch is OFF, all 15 White LEDs will be OFF.
2. The service technician will instruct the tester to "Press and hold the <15> key". If the tester verifies that the fan relay turned ON, this step passed. Releasing the <15> key will turn the relay OFF.
3. Next the service technician will instruct the tester to "Press and hold the <10> key". If the tester verifies that the pump relay turned ON by detecting a wattage change of approximately 60W, this step passed. Releasing the <10> key will turn the relay OFF. Verify that the power consumption decreased.
4. Next the service technician will instruct the tester to "Press and hold the <X> key". If the tester verifies that the heater reads approximately 1300W, this step passed. Releasing the <X> key will turn the relay OFF.
5. The blue LED will flash ON and OFF if the thermistor is operating correctly.
6. The blue LED will turn ON if the thermistor is OPEN or SHORTED.
7. Open the door and the orange LED will turn OFF.
8. Shut the door and the orange LED will flash ON and OFF.
9. Service diagnostics will end after two minutes or if power is cycled.

NOTE: Refer to table on page 4-5 for diagnostic test functions.

For Service Technician Use Only

Service Diagnostic Functions (see page 4-4 for instructions)

Right after powering up (plugging in the SWASH™ system), you will have 30 seconds to press the three different keys in any sequence three times within 10 seconds to place the SWASH™ system in service diagnostic mode. If entrance to service diagnostic mode is successful, the following functions will be available.

COMPONENT	KEY	STATUS	LEDs
RESERVOIR SWITCH		ON OFF	All 15 White LEDs flash ON and OFF All 15 White LEDs OFF
FAN RELAY	"15"	Activates Fan*	N/A
PUMP RELAY	"10"	Activates Pump†	N/A
HEATER RELAY	"X"	Activates Heater‡	N/A
THERMISTOR		Functional Open/Shorted	Blue LED Flash ON and OFF Blue LED will turn ON
DOOR SWITCH		Open Closed	Orange LED will turn OFF Orange LED Flash ON and OFF

NOTES:

* Press and hold the <15> key to turn on the Fan. Release the <15> key to turn off the Fan.

† Press and hold the <10> key to turn on the Pump. Release the <10> key to turn off the Pump.

‡ Press and hold the <X> key to turn on the Heater. Release the <X> key to turn off the Heater. (You will hear the heater solenoid on the ACU "click" when the heater turns on and off.)

For Service Technician Use Only

Fault / Error Codes

DISPLAY	ERROR CODE	MALFUNCTION	EXPLANATION AND RECOMMENDED PROCEDURE
LED ON: **12, 14** **LED FLASHING:** **ORANGE**	F3E1	Open Thermistor Condition	Continually monitor temperature sensor for an invalid resistance value based on the thermistor reading value out of the range of 35.42kΩ (32°F/0°C) and 719Ω (212°F/100°C). This error will show if reading more than 35.42kΩ for more than 30 seconds. 1. Review the ambient temperature of the room; if the temperature of the sensor is less than 32°F (0°C), the error will remain. 2. Verify the wire harness connection. Any open connection will create a resistance higher than 35.42kΩ and the error will remain. 3. Reset the ACU by unplugging the SWASH™ system for more than 5 seconds. 4. Enter the service diagnostics mode (see page 2) and review the operation of the thermistor. 5. Verify the resistance value of the thermistor (J3-5 to J3-6); if it is open or shorted, replace the thermistor.
LED ON: **10, 12, 14** **LED FLASHING:** **ORANGE**	F2E2	Shorted Thermistor Condition	Continually monitor temperature sensor for an invalid resistance value based on the thermistor reading value out of the range of 35.42kΩ (32°F/0°C) and 719Ω (212°F/100°C). This error will show if reading less than 719Ω for more than 30 seconds. 1. Review the ambient temperature of the room; if the temperature of the sensor is more than 212°F (100°C), the error will remain. 2. Verify the wire harness connection. Any shorted connection will create a resistance lower than 719Ω and the error will remain. 3. Reset the ACU by unplugging the SWASH™ system for more than 5 seconds. 4. Enter the service diagnostics mode (see page 2) and review the operation of the thermistor. 5. Verify the resistance value of the thermistor (J3-5 to J3-6); if it is open or shorted, replace the thermistor.
LED ON: **8, 10, 12, 14** **LED FLASHING:** **ORANGE**	F2E1	Shorted Key Event	If the control detects an invalid key press (one or more keys pressed for more than 5 seconds), the UI will generate an error code (F2E1) to the ACU. 1. Disconnect the WIDE Connector of the UI and reset the SWASH™ system by unplugging the power for more than 5 seconds. By doing this, the capacitive buttons will recalibrate. 2. Make sure that the UI PCB Assembly is not affected by extreme ambient conditions like temperature (185°F [85°C] max.) and humidity (95% non condensate). 3. Verify 5V input from WIDE connector between lines P1-1 and P3-1. 4. Inspect the keypad area to confirm that there are no liquids, moisture, or any other foreign materials on the capacitive button area.

Continued . . .

For Service Technician Use Only

Fault / Error Codes (continued)

DISPLAY	ERROR CODE	MALFUNCTION	EXPLANATION AND RECOMMENDED PROCEDURE
LED ON: **6, 8, 10, 12, 14** **LED FLASHING:** **ORANGE**	F6E1	WIDE Communication	The failure will be shown if: Communication • The ACU has not received a valid WIDE serial communication message within 30 seconds. • The ACU has detected continuous problems with messages transmitted over the WIDE bus. • If communication is resumed at any time, the display will function normally. 1. Check the wire harness connection between the ACU and the UI, and measure continuity between all wires. 2. Make sure that the UI PCB Assembly and the ACU board are not affected by extreme ambient conditions like temperature (185°F [85°C] max.) and humidity (95% non condensate). 3. Reset the SWASH™ system by disconnecting the power for more than 5 seconds. 4. Verify 5V output from the WIDE connector between lines P1-1 and P3-1 and the P19 connector. 5. Enter the service diagnostics mode (see page 2) and review the operation of the thermistor.
LED ON: **4, 6, 8, 10, 12, 14** **LED FLASHING:** **ORANGE**	F1E1	Microcontroller Fault	If a corrupted microcontroller or communication error has occurred, the ACU will generate this error code. 1. Review input voltage from lines P12 and P9. It should be 120 VAC/60 Hz. 2. Make sure that the ACU board is not affected by extreme ambient conditions like temperature (185°F [85°C] max.) and humidity (95% non condensate). 3. Remove the ACU board from the plastic chassis and perform a visual inspection of the back of the board. 4. Verify 5V and 12V output on the P19 connector between pins P19-2 and P19-3 for 5V, and P19-1 and P19-3 for 12V. 5. If no voltage is detected in step 4, replace the ACU.

For Service Technician Use Only

Troubleshooting Guide

⚠ DANGER

Electrical Shock Hazard

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

PROBLEM	POSSIBLE CAUSE /TEST NOTE: Possible Causes/Tests must be performed in the sequence show for each problem.
WON'T POWER UP **(buttons do not respond when pressed)**	1. Verify that the SWASH™ system is plugged into a working outlet and that there are no blown fuses or tripped circuit breakers. 2. Verify that the plug does not have two adapters attached to it. 3. Unplug the SWASH™ system or disconnect the power. 4. Reconnect the power. 5. Check the voltage available (120V) at the ACU terminals (CON2-P12 and CON1-P9). If there is voltage, go to step 10. 6. If there is no voltage at the ACU, disconnect the power cord from the harness and check if there is voltage (120V) at the connector that plugs into the harness. If there is voltage at the power cord connector, go to step 8. 7. Replace the power cord if there is no voltage at the connector. 8. Check the continuity between power cord connector terminal 1 on the harness and CON2-P12. Check the continuity between terminal 2 and CON1-P9. 9. Replace the harness if there is no continuity in any line. 10. Check that there is 5V DC between pin 2 and pin 3 at connector P19 inside the ACU. 11. If there is no voltage between pin 2 and pin 3 at connector P19 on the ACU, replace the ACU. 12. If there is voltage between pin 2 and pin 3 at connector P19 on the ACU, replace the UI.
WON'T START A CYCLE	1. Verify that there is a cup inside the SWASH™ system. 2. Check if the orange LED on the UI is flashing at a rate of 3 Hz. 3. If the orange LED is flashing and a cup is inserted in the SWASH™ system, verify that the piercing mechanism is functioning properly. 4. Verify that the pump harness is connected to the ACU at connector J1-10. 5. Disconnect the pump, attempt to start a cycle, and verify that there is voltage at the pump terminals on the harness during the dispensing phase. 6. If there is no voltage at the pump terminals on the harness, check the continuity of the harness between the pump and the ACU. If continuity is OK, replace the ACU.
WON'T DISPENSE	1. Verify that the cup inside the SWASH™ system is new. 2. Disconnect the pump, attempt to start a cycle, and verify that there is voltage at the pump terminals on the harness during the dispensing phase. If there is voltage, go to step 4. 3. If there is no voltage at the pump terminals on the harness, check the continuity of the harness between the pump and the ACU. If continuity is OK, replace the ACU. 4. If there is voltage at the pump terminals on the harness, replace the pump.

Continued . . .

For Service Technician Use Only

Troubleshooting Guide (continued)

PROBLEM	POSSIBLE CAUSE /TEST NOTE: Possible Causes/Tests must be performed in the sequence show for each problem.
GARMENT IS WET	1. Disconnect the fan motor and verify that there is voltage of 120V at the fan motor connector on the harness during the running/drying mode. If there is voltage, go to step 5. 2 If there is no voltage at the fan motor connector on the harness, check the continuity between fan motor connector terminal 1 and CON1-P11 and also between fan motor connector terminal 2 and CON1-P9. 3. Replace the harness if there is no continuity in any line. 4. Replace the ACU if the harness is OK and if voltage was not found at the fan motor connector on the harness in step 1. 5. If there is voltage at the fan motor connector on the harness, replace the fan motor.
THERE IS A PUDDLE OF WATER BENEATH THE SWASH™ SYSTEM	1. Empty the reservoir tray. 2. Disconnect the reservoir sensor switch. 3. Check the continuity (J3-3 to J3-4) in the reservoir sensor switch connector to the SWASH™system when the reservoir tray is inserted. If there is continuity, go to step 5. 4. If there is no continuity, replace the reservoir sensor switch. 5. Check the continuity in the harness between reservoir sensor switch connector terminal 1 and CON3-P4 and also between sensor switch connector terminal 2 and CON3-P3. 6. Replace the harness if there is no continuity in any line. 7. If none of these steps indicate an electrical problem, the problem is mechanical and the reservoir tray must be replaced.
CUP IS NOT COMPLETELY EMPTY	1. Verify that the piercing mechanism is properly piercing the cup. 2. Remove the needle and make sure that liquid can pass through it. 3. Inspect the hoses to verify that they are not kinked. 4. Replace the pump.
SWASH™ SYSTEM STARTS BY ITSELF	1. Check for an error code on the SWASH™ system display. 2. Verify that there is voltage of 5V DC between pin 2 and pin 3 at connector P19 on the ACU. 3. If there is no voltage between pin 2 and pin 3 at connector P19 on the ACU, replace the ACU. 4. If there is voltage between pin 2 and pin 3 at connector P19 on the ACU, replace the UI.
SWASH™ SYSTEM VIBRATES OR IS NOISY	1. Verify that the pump is properly attached. 2. Make sure that the impeller is not touching the lower blower. 3. Verify that the motor is properly attached. 4. Verify that the motor shaft is not damaged.

For Service Technician Use Only

Wiring Diagram

IMPORTANT: Electrostatic discharge may cause damage to control electronics. See page 5-1 for ESD information.

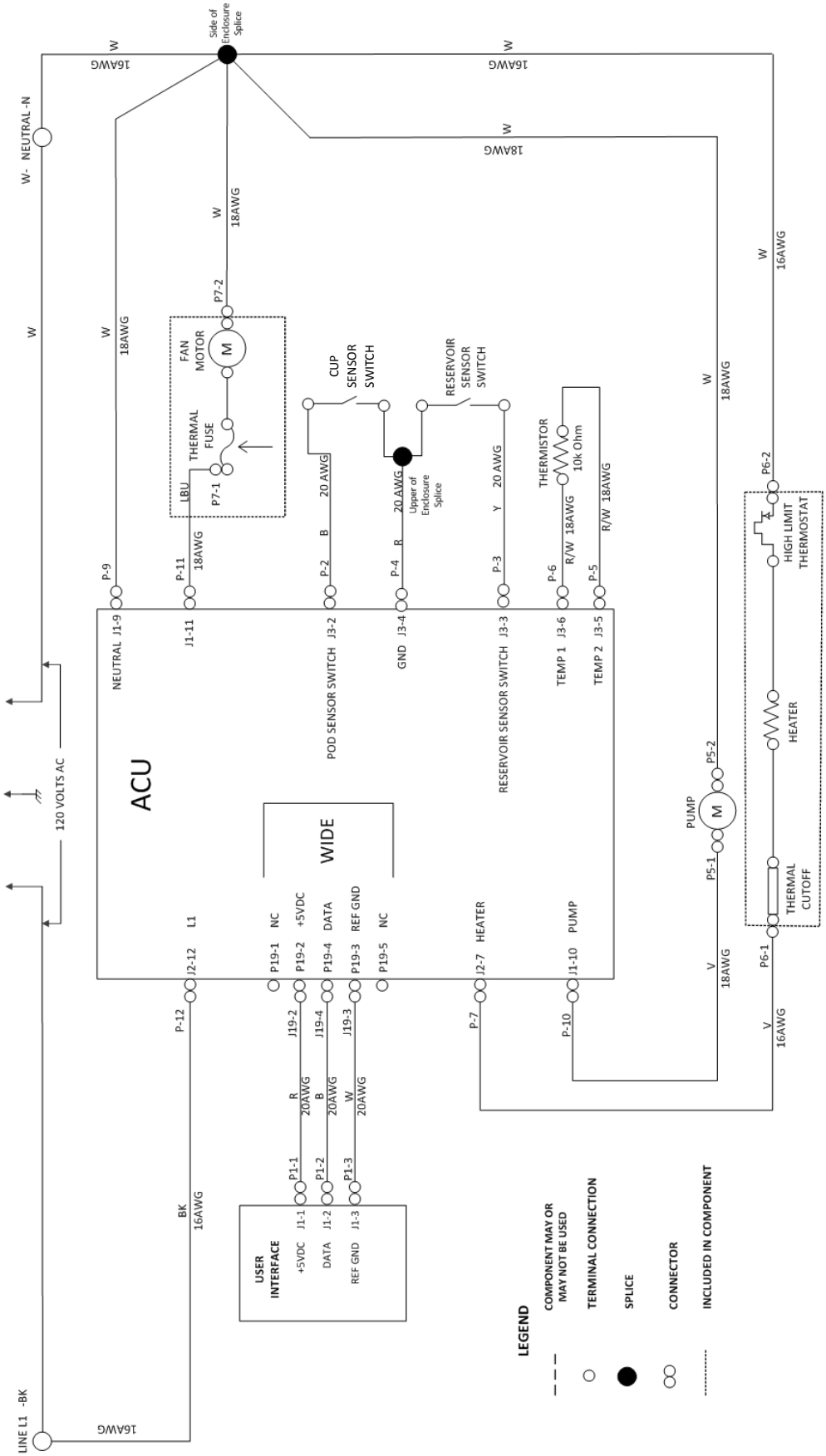


Figure 2

For Service Technician Use Only

Appliance Control Unit (ACU)

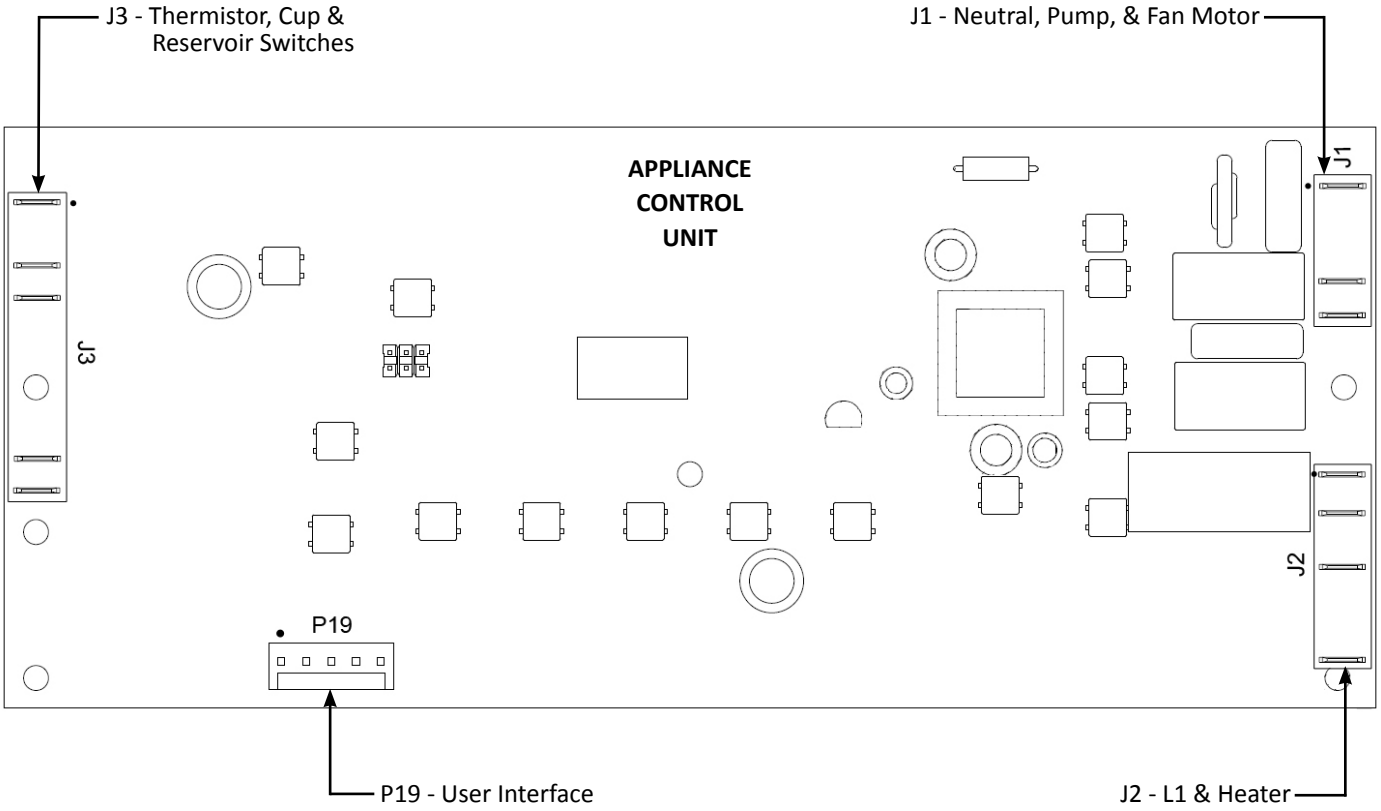


Figure 3

ACU CONNECTOR PIN-OUTS

CONNECTOR J1
(Neutral, Pump, and Fan Motor)

J1-9	Neutral from plug
J1-10	Pump
J1-11	Fan Motor

CONNECTOR J2
(L1 and Heater)

J2-7	Heater Assembly
J2-12	L1 from plug

CONNECTOR J3
(Pod Switch, Reservoir Switch, and Thermistor)

J3-2	Switch, Cup Sensor
J3-3	Switch, Reservoir Sensor
J3-4	Switch, GND
J3-5	Thermistor (Temp 2)
J3-6	Thermistor (Temp 1)

CONNECTOR P19
(User Interface)

P19-2	+5 VDC
P19-3	Ref GND
P19-4	DATA

For Service Technician Use Only

User Interface (UI) Assembly

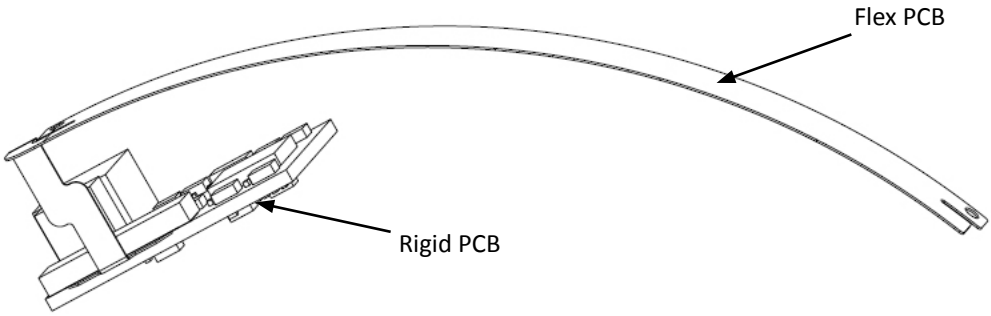


Figure 3 - User Interface Assembly

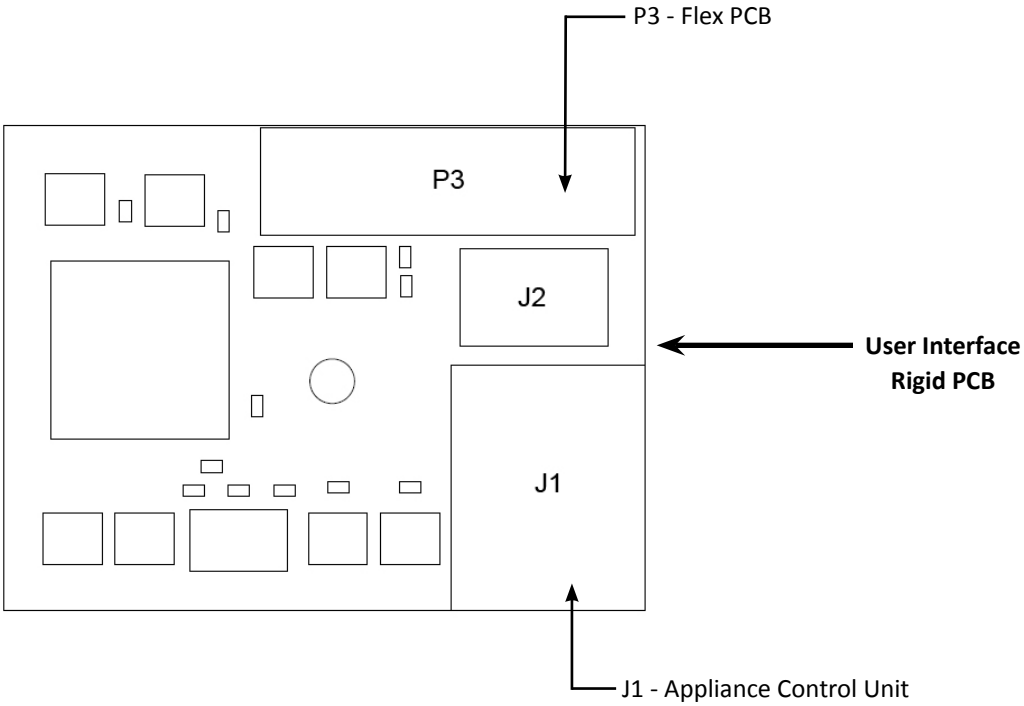


Figure 3 - Rigid PCB

UI CONNECTOR PIN-OUTS

CONNECTOR J1
(Appliance Control Unit)

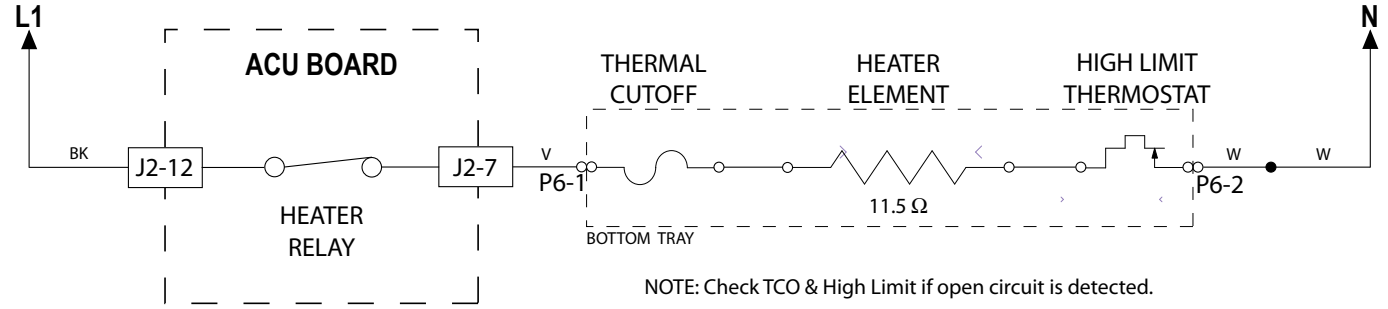
J1-1	+5 VDC
J1-2	DATA
J1-3	Ref GND

CONNECTOR P3
(Flex PCB)
P3 - Ribbon Connector

For Service Technician Use Only

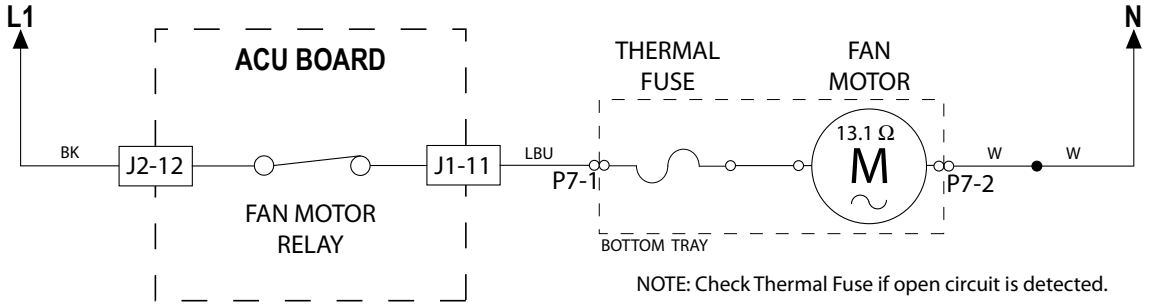
Strip Circuits

Heater



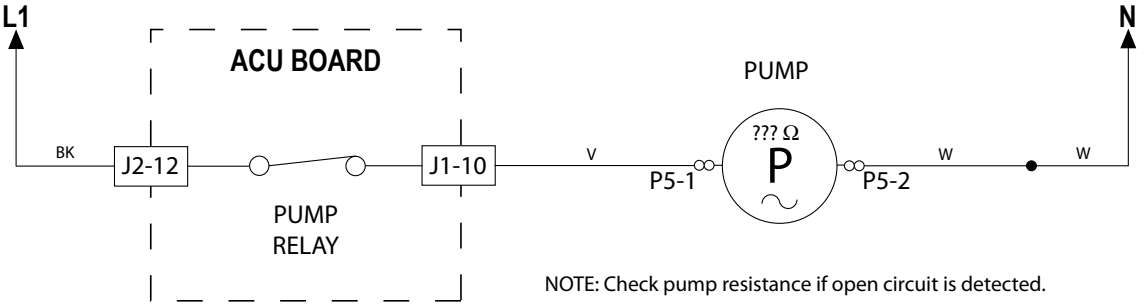
NOTE: Check TCO & High Limit if open circuit is detected.

Fan Motor



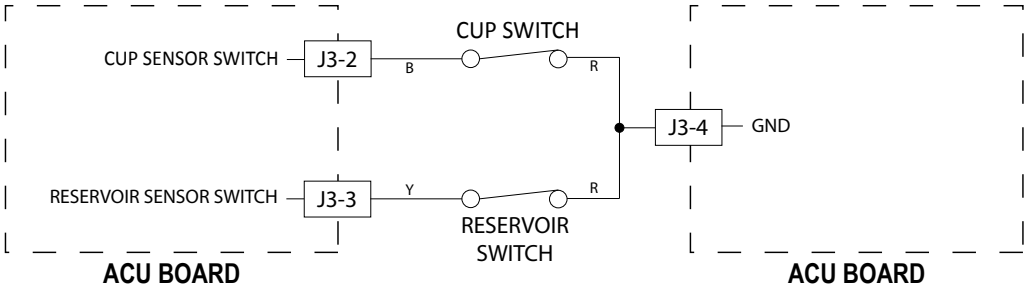
NOTE: Check Thermal Fuse if open circuit is detected.

Pump

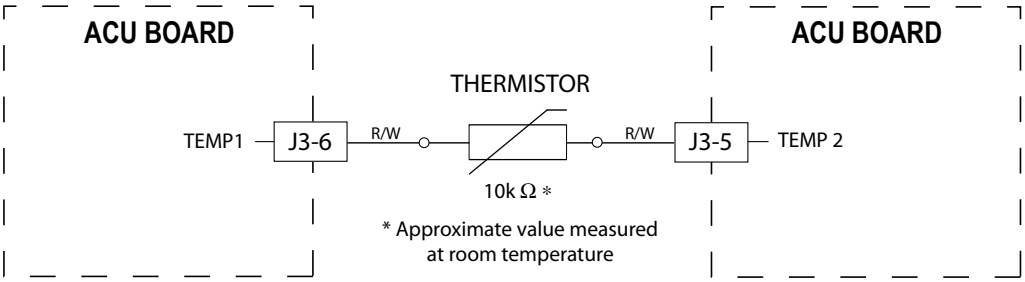


NOTE: Check pump resistance if open circuit is detected.

Pod / Reservoir Switches



Thermistor



* Approximate value measured at room temperature

Notes

PRODUCT SPECIFICATIONS & WARRANTY INFORMATION SOURCES

IN THE UNITED STATES:

FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:

PHONE: 1-866-333-4195

FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:

THE TECHNICAL ASSISTANCE LINE: 1-800-832-7174

HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN AUTHORIZED IN-HOME SERVICE PROFESSIONAL

FOR LITERATURE ORDERS (CUSTOMER EXPERIENCE CENTER):

PHONE: 1-800-851-4605

FOR TECHNICAL INFORMATION AND SERVICE POINTERS:

www.servicematters.com

IN CANADA:

FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL

PHONE: 1-800-461-5681

FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:

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